

Appl. No. 09/517,903
Amendment Dated September 8, 2004
Reply to Office Action Mailed July 13, 2004

LISTING OF CLAIMS

The listing of claims below replaces all prior versions, and listings, of claims:

- 1 1. (Previously Presented) Apparatus for use in a telephony system, comprising:
2 a digital interface for connection with a stimulus telephone;
3 a packet interface for communicating with a packet-based network; and
4 a controller to receive stimulus control information from the digital interface and
5 to encapsulate the stimulus control information into one or more packets for transmission over
6 the packet-based network through the packet interface.
- 1 2. (Original) The apparatus of claim 1, wherein the controller encapsulates the
2 stimulus control information into an Internet Protocol packet.
- 1 3. (Original) The apparatus of claim 1, wherein the digital interface includes a
2 UART interface.
- 1 4. (Original) The apparatus of claim 1, wherein the digital interface includes a time
2 compression multiplex interface.
- 1 5. (Original) The apparatus of claim 1, wherein the controller adds a destination
2 address of a telephone switch system into the one or more packets.
- 1 6. (Previously Presented) The apparatus of claim 1, wherein the controller adds a
2 destination address of a second stimulus telephone into the one or more packets.
- 1 7. (Original) The apparatus of claim 1, wherein the stimulus control information is
2 according to a first stimulus language, and wherein the stimulus control information remains in
3 the first stimulus language after encapsulation.

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1 8. (Original) The apparatus of claim 1, wherein the controller encapsulates the
2 stimulus control information without translating the stimulus control information into a different
3 form.

1 9. (Original) The apparatus of claim 8, wherein the controller encapsulates the
2 stimulus control information by adding header information according to a network protocol.

1 10. (Original) The apparatus of claim 9, wherein the network protocol header
2 information includes an Internet Protocol header.

1 11. (Original) The apparatus of claim 9, wherein the controller adds further header
2 information according to a transport protocol.

1 12. (Original) The apparatus of claim 11, wherein the further header information
2 includes a User Datagram Protocol header.

1 13. (Original) The apparatus of claim 1, wherein the controller also scrambles the
2 stimulus message before encapsulation.

1 14. (Original) The apparatus of claim 1, wherein the controller encrypts the one or
2 more packets.

1 15. (Original) The apparatus of claim 1, further comprising a receiver to receive the
2 one or more packets, the receiver including an element to decapsulate the one or more packets to
3 extract the stimulus control information.

1 16. (Original) The apparatus of claim 15, wherein the receiver is associated with a
2 second stimulus device, and wherein the extracted stimulus control information is in a native
3 stimulus language of the second stimulus device.

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1 17. (Previously Presented) The apparatus of claim 1, wherein the stimulus control
2 information includes at least one of hook state information and key press event information, the
3 controller to encapsulate the at least one of the hook state information and key press event
4 information into the one or more packets.

1 18. (Previously Presented) The apparatus of claim 1, wherein the stimulus control
2 information includes a command selected from the group consisting of a handset volume control
3 command, a handset connect/disconnect command, and a ringer activation command, the
4 controller to encapsulate the command selected from the group consisting of the handset volume
5 control command, the handset connect/disconnect command, and the ringer activation command.

1 19. (Cancelled)

1 20. (Previously Presented) A method for use in a telephony system, comprising:
2 communicating stimulus control information with a stimulus telephone through a
3 first interface connected to the stimulus telephone, and packet information with a packet-based
4 network through a packet interface;
5 encapsulating stimulus control information received from the first interface; and
6 transmitting the encapsulated stimulus control information as at least one packet
7 to the packet interface.

1 21. (Previously Presented) The method of claim 20, further comprising:
2 decapsulating one or more packets received from the packet interface and
3 containing stimulus control information; and
4 transmitting the stimulus control information of the decapsulated one or more
5 packets to the first interface.

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1 22. (Original) The method of claim 20, wherein the stimulus control information is in
2 a native stimulus language, and wherein encapsulating the stimulus control information includes
3 inserting the stimulus control information in its native stimulus language into a payload of the at
4 least one packet.

1 23. (Original) The method of claim 22, wherein encapsulating the stimulus control
2 information includes adding a network protocol header to the stimulus control information.

1 24. (Original) The method of claim 23, wherein encapsulating the stimulus control
2 information includes adding an Internet Protocol header.

1 25. (Original) The method of claim 24, wherein encapsulating the stimulus control
2 information further includes adding a User Datagram Protocol header.

1 26. (Original) The method of claim 20, further comprising scrambling the stimulus
2 control information before encapsulating.

1 27. (Original) The method of claim 20, further comprising encrypting the at least one
2 packet.

1 28. (Previously Presented) An article including one or more machine-readable storage
2 media containing instructions for call control in a telephony system, the instructions when
3 executed causing a device to:

4 receive data according to a stimulus protocol from a first interface connected to a
5 stimulus telephone;

6 encapsulate the data into one or more packets; and

7 communicate the one or more packets to a packet-based data network.

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1 29. (Original) The article of claim 28, wherein the one or more storage media contain
2 instructions that when executed causes the device to:

3 receive a packet containing data according to the stimulus protocol;

4 decapsulate the packet; and

5 communicate the data according to the stimulus protocol to the first interface.

1 30. (Previously Presented) A data signal embodied in a carrier wave and containing
2 instructions for call control in a telephony system, the instructions when executed causing a
3 device to:

4 receive at least one packet containing a stimulus message according to a first
5 language;

6 decapsulate the at least one packet to extract the stimulus message according to
7 the first language; and

8 send the stimulus message according to the first language to a first interface
9 connected to a stimulus telephone.

1 31. (Previously Presented) The data signal of claim 30, further containing instructions
2 that when executed causes the device to:

3 receive a stimulus message according to the first language through the first
4 interface connected to the stimulus telephone; and

5 encapsulate the stimulus message according to a first language into at least one
6 packet.

1 32. (Cancelled)

1 33. (Cancelled)

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1 34. (Previously Presented) An apparatus for use in a telephony system, comprising:
2 means for receiving a stimulus message through a first interface connected to a
3 stimulus telephone;
4 means for encapsulating the stimulus message into at least one packet; and
5 means for transmitting the at least one packet to a packet-based network.

1 35. (Previously Presented) The apparatus of claim 1, further comprising an interface
2 card adapted to be inserted into a slot of the stimulus telephone, the interface card comprising the
3 digital interface, the packet interface, and the controller.

1 36. (Previously Presented) The apparatus of claim 1, wherein the digital interface is
2 adapted to exchange the stimulus control information with the stimulus telephone.

1 37. (Previously Presented) The apparatus of claim 1, wherein the stimulus control
2 information contains a command according to a stimulus protocol selected from the group
3 consisting of off-hook, on-hook, handset volume control, handset connect, and handset
4 disconnect, the controller to encapsulate the command selected from the group consisting of off-
5 hook, on-hook, handset volume control, handset connect, and handset disconnect in the one or
6 more packets.

1 38. (Previously Presented) The apparatus of claim 1, further comprising a receiver to
2 receive one or more inbound packets containing inbound stimulus control information, the
3 controller to decapsulate the one or more inbound packets to extract the inbound stimulus control
4 information.

1 39. (Previously Presented) The apparatus of claim 38, wherein each of the one or
2 more inbound packets contains a User Datagram Protocol (UDP) port number, the controller to
3 determine from the UDP port number whether the corresponding inbound packet contains voice
4 data or stimulus control information.

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1 40. (Previously Presented) The method of claim 20, further comprising providing an
2 interface card to be inserted into a slot of the stimulus telephone, the interface card having the
3 first interface and the packet interface,
4 wherein encapsulating the stimulus control information and transmitting the
5 encapsulated stimulus control information and transmitting the encapsulated stimulus control
6 information is performed by the interface card.

1 41. (Previously Presented) The method of claim 20, wherein encapsulating the
2 stimulus control information comprises encapsulating a command according to a stimulus
3 protocol selected from the group consisting of off-hook, on-hook, handset volume control,
4 handset connect, and handset disconnect.

1 42. (Previously Presented) The method of claim 21, wherein each of the received one
2 or more packets contains a User Datagram Protocol (UDP) port number, the method further
3 comprising determining from the UDP port number whether the corresponding received packet
4 contains voice data or stimulus control information.

1 43. (Previously Presented) The article of claim 28, wherein encapsulating the data
2 according to the stimulus protocol comprises encapsulating one of an off-hook stimulus
3 command, on-hook stimulus command, handset volume control stimulus command, handset
4 connect stimulus command, and handset disconnect stimulus command.

1 44. (Previously Presented) The data signal of claim 30, wherein receiving the at least
2 one packet containing the stimulus message comprises receiving the at least one packet
3 containing stimulus message containing at least a command selected from the group consisting
4 of off-hook, on-hook, handset volume control, handset connect, and handset disconnect.

1 45. (Previously Presented) The apparatus of claim 34, wherein the stimulus message
2 contains at least a command selected from the group consisting of off-hook, on-hook, handset

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3 volume control, handset connect, and handset disconnect, the means for encapsulating to
4 encapsulate the command selected from the group consisting of off-hook, on-hook, handset
5 volume control, handset connect and handset disconnect.

1 46. (Previously Presented) The apparatus of claim 34, further comprising:
2 means for decapsulating the at least one packet received from the packet-based
3 network and containing the stimulus message.

1 47. (Previously Presented) The apparatus of claim 34, further comprising means for
2 encrypting the at least one packet.

1 48. (Previously Presented) The apparatus of claim 34, further comprising means for
2 scrambling the stimulus message before encapsulating.

1 49. (Previously Presented) The apparatus of claim 35, wherein the interface card is
2 adapted to be inserted into a slot of a telephone.

1 50. (Previously Presented) The method of claim 40, wherein providing the interface
2 card comprises inserting the interface card into a slot of the stimulus telephone.

1 51. (Previously Presented) The apparatus of claim 1, wherein the digital interface is
2 adapted to communicate with the stimulus telephone through an input/output port of the stimulus
3 telephone.

1 52. (Previously Presented) The method of claim 20, wherein communicating the
2 stimulus control information comprises communicating the stimulus control information through
3 the interface and an input/output port of the stimulus telephone.

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1 53. (Previously Presented) The article of claim 28, wherein receiving the data
2 according to the stimulus protocol comprises receiving the data according to the stimulus
3 protocol through the first interface and an input/output port of the stimulus telephone.

1 54. (Previously Presented) The data signal of claim 30, wherein sending the stimulus
2 message comprises sending the stimulus message to the first interface and an input/output port of
3 the stimulus telephone.

1 55. (Previously Presented) The apparatus of claim 34, wherein receiving means is for
2 receiving the stimulus message through the first interface and an input/output port of the stimulus
3 telephone.